

than a hundred yards at a time, and looking something like a fledgling that has just escaped from the nest. Yet it is a bird that lives exclusively at high altitudes. We meet with it in Tibet at 13,000 feet where it seems quite at home in the rarified air. The flight of the skylark is out of the ordinary. It towers up perpendicularly through the air while pouring forth its melodious notes. Yet its towerings seem in no way affected by altitude. In Tibet it towers and sings at 15,000 feet as delightfully as in an English field.

It is the same with soaring birds. Eagles and buzzards at 16,000 feet sail and circle with the same ease as do their representatives at moderate heights. The griffon loves to sail over Himalayan passes. I have often watched its effortless motion at a height of 20,000 feet. The lammergeyer used to visit our Mount Everest base camp and at that height of 17,000 feet used to float and circle and glide downward after food with all its accustomed facility and grace. Nor can it just sail in circles at this considerable height, but can carry itself up through the attenuated air without making the slightest movement of its wings. I do not know to what a height it can perform this feat. Certainly it can sail across the main Himalaya at the great height of 23,000 feet.

Birds which visited the Mount Everest base camps seemed in no way incommoded by the thin atmosphere. We had choughs and pigeons in Camp I at 18,000 feet, crows and mountain-finches in Camp III at 21,000 feet, choughs almost daily in Camp IV at 23,000 feet. Indeed choughs seemed completely independent of altitude for they followed the climbers to the immense height of 27,000 feet. Their capacities of flight appeared in no way diminished. There was nothing to show that they moved through an atmosphere reduced to one-third of its supporting power.

Thus we see how independent birds seem to be of the supporting influence of the air. Diminish the pressure of the atmosphere by half and ordinary flight seems in no way affected. And even those more elaborate aerial performances, such as parachuting, hovering, towering, soaring, are all performed with perfect ease.

R. W. G. HINGSTON,

*Major, I.M.S.*

## XXI.—THE OCCURRENCE OF THE GHARIAL (*GAVIALIS GANGETICUS*) IN BURMA

Mr. H. B. Prior has very kindly forwarded to me the skull of a crocodile recently shot in the Shweli River in Upper Burma.

We have sent you the skull because it is believed to be a gharial and the first record of its occurrence in Burma.

Moreover the fact of its being killed in the Shweli, well over a thousand miles by river from the delta of the Irrawaddi, is a point of great interest.

The crocodile was shot by Mr. Hannyngton at the mouth of the Maingtha Stream some 40 miles from the mouth of the Shweli, which runs into the Irrawaddi about 20 miles below Katha.

It was shot in July of this year (1927) and the measurements were as follows:—

Over-all length	...	16' 6"
Mid girth (at thickest point)	...	6' 6"
Breast girth	...	5' 7"
Tail length	...	7' 9"
Body (neck to base of tail)	...	6' 3"

Mr. J. A. E. Upton has kindly supplied the following details:—

'I saw it the day after it was shot. It is undoubtedly a gharial or fish-eater, the technical name being I believe *Gavialis gangeticus*, colour, webbed feet, crested legs and long snout all agreeing with W. S. Burke's description in the *Indian Field Shikar Book*. When skinned, one spherical ball was found in the stomach.'

'A crocodile' has been reported by villagers at the mouth of the Maingtha for some years past. It is usually seen after the first rise in the Shweli, about the end of June, and never after the river has sunk to its cold weather level in December.'

Since this one was shot another is rumoured to have appeared on one or two occasions near Molon (near mouth of Maingtha), but so far I have had no opportunity of verifying this. A crocodile was shot in the Shweli some years ago but unfortunately was not identified.

These crocodiles appear to go to the main Irrawaddi after the rains as I have rumours of them having been seen near Tagaung in the hot weather.

I should be very grateful if you would let me have a note as to its identification after you have examined it.

MAYMYO, BURMA,  
December 24, 1927.

C. G. BARTON.

[The skull forwarded to us is, as identified, that of a Gharial or Gavial (*Gavialis gangeticus*) and its occurrence in the area mentioned, marks a considerable extension of its known habitat. This species has hitherto been known to occur in the Indus, Ganges and Brahmaputra rivers and their larger tributaries, also in the Mahanadi of Orissa and the Koladyne (Koladainge) or Kaladan River of Arrakan—the latter being the only known record of its occurrence in Burma. Its discovery in the Maingtha Stream a sub-tributary of the Irrawaddy therefore is of considerable interest.

The Irrawaddy is formed by the confluence of the Mali-Kha and N'mai-Kha rivers both of which appear to have their sources in the region of the Nam-Kui Mts. on the southern borders of Tibet on whose western slopes some of the tributaries of the Brahmaputra have their origin. The small streams and water courses of this region *may* have provided the means of intercommunication between the tributaries of the Brahmaputra and the Irrawaddy and have accounted for the extension of the range of this crocodile. EDS.]